

7. Signal-Dependent Branch Metric Function

Signal-Dependent Branch Metric Function

Claim Term	CMU's Construction	Marvell's Construction
<p>signal-dependent branch metric function</p> <p>'839 Patent Claims 3 and 4 '180 Patent Claim 2</p>	<p>a "branch metric function" that accounts for the signal- dependant structure of the media noise.</p> <p>CMU Brf. at 32</p>	<p>a "branch metric function" that accounts for "signal-dependent noise."</p> <p>Marvell Brf. at 35-36</p>

- The Dispute:
 - ▶ Does "signal-dependent branch metric function" have its ordinary meaning (Marvell) or should it be limited to a particular type of noise (media noise) found in magnetic recording (CMU)?

No Further Construction Necessary

- Where “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, [] claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.”

Phillips, 415 F.3d at 1314.

- ▶ Jury will be instructed on agreed-to meanings:
 - “signal sample” means “a value of a signal at a certain point in time.”
 - “branch metric function” means “a mathematical function for determining a ‘branch metric value’ for a ‘branch.’”
 - “noise” means “an unwanted disturbance in a signal.”
- ▶ “dependent” is well-known
- ▶ “Signal Dependent Branch Metric Function” thus means “a branch metric function that accounts for signal-dependent noise”

Joint Agreed Terms (Dkt. 74)

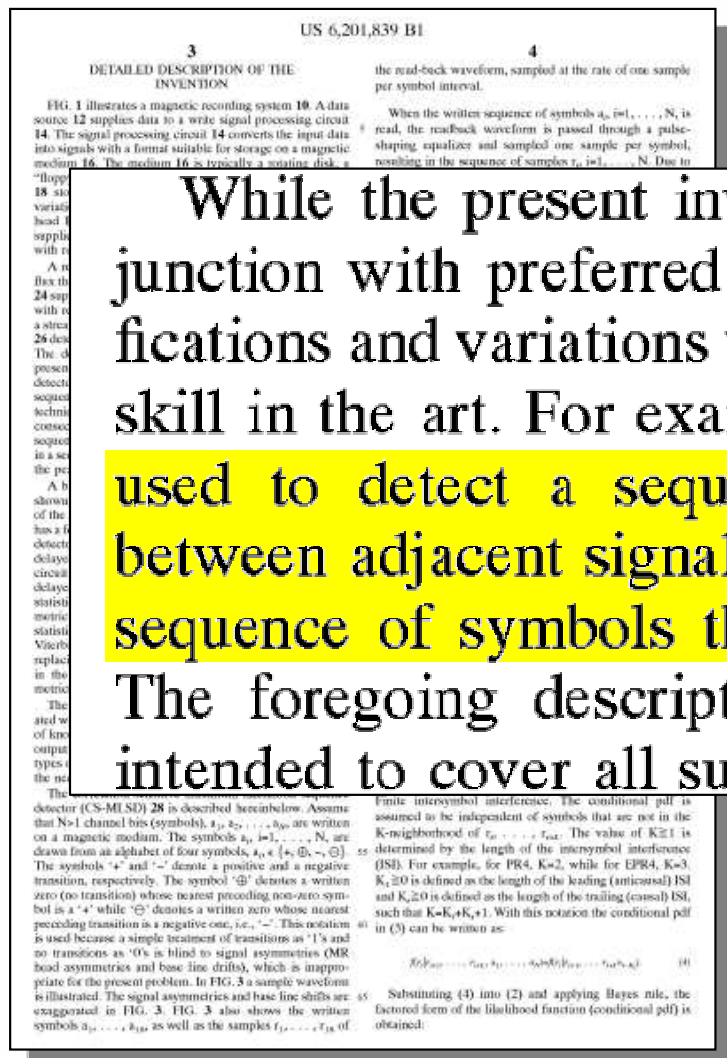
CMU's "Media Noise" Argument Fails

- Claimed method not limited to magnetic recording
- Method refers to a generic set of signal-dependent branch metric functions

4. A method of determining branch metric values for branches of a trellis for a Viterbi-like detector, comprising: selecting a branch metric function for each of the branches at a certain time index from a set of signal-dependent branch metric functions; and applying each of said selected functions to a plurality of signal samples to determine the metric value corresponding to the branch for which the applied branch metric function was selected, wherein each sample corresponds to a different sampling time instant.

'839 Patent Claim 4; see also '839 Patent Claim 3, '180 Patent Claim 2

CMU's "Media Noise" Argument Fails



'839 Patent 13:51-59

- “Signal dependent noise” is different in other communications channels

See *supra*, slides 61-66